

REMARKS

In the Office Action of June 17, 2004, the Examiner rejected claim 1. Claim 1 has been cancelled and a new set of claims 37-111 is presented. In order to advance prosecution, the new claims 37-111 will be discussed with respect to the reference applied against original claim 1. Reconsideration of this application is therefore respectfully requested.

I.

The Examiner objected to the drawings and specification for various reasons. Corrections have been made to the specification at pages 7, 8, and 15, which are believed to overcome the objection. New drawings are also submitted correcting certain inaccuracies in the original drawings. No new matter has been added.

II.

The Examiner rejected claim 1 as being unpatentable over JP 9-64397A. Claim 1 has been canceled, rendering this rejection moot.

Claim 37 recites a multijunction solar cell and a bypass device integral to a subcell and having p-type, i-type and n-type layers. The JP 9-64397A reference cited by the Examiner against the original claim 1 depicts a bypass diode 102 formed “on the same conductive substrate 103.” But such bypass diode is not “integral to a subcell” as recited in claim 37. In an examination of Fig 1 of JP ‘397, there is depicted a solar cell 101 with layers 104A, 105A, 107A, 104B, etc. The adjacent diode 102 has completely different layers: 105D, 104D, 107D, etc., which do not align with the layers 104A, 105A, 107A, 104B of the cell 101. Since there is no correspondence of layers, the solar cell and the diode are different structures, and the

layers of the diode 102 is not common with any of the layers in any subcell of the solar cell 101. Similar conclusions can be drawn by examining Figs. 2, 3, 4, 5, 6, 7, 8 and 9 of JP '397. Thus, new claim 37, and the claims 38-46 dependent thereon, are patentably distinguished from JP '397.

Similarly, independent claim 47 and the claims dependent thereon recite a second region with "an integral bypass diode," and such claims are patentably distinguished from JP '397 for the same reasons.

Claim 50 recites "a second region separated from said first region by a trough ..." and claim 65 recites a "metal layer . . . for shorting the first sequence of layers." Neither feature is rendered unpatentable by JP '397.

The method claim 74 is distinguished from JP '397 for the same reasons noted in connection with claim 37 above. Method claims 79 and 82 also describe features that are not rendered unpatentable by JP '397.

Finally, claims 86-111 recite features, such as a metal layer or lateral conduction layer, that are not rendered unpatentable by JP '397.

III

The Examiner provisionally rejected claim 1 under the doctrine of obviousness-type double patenting as being unpatenable over claims 2-36 of co-pending application serial number 10/280,593. Reconsideration of the Examiner's double patenting rejection is respectfully requested in view of the newly submitted claims 37-111.

IV.

Applicants have attached a Petition for Extension of Time for one month. If there are any additional charges concerning this response, please charge to White & Case LLP Deposit Account 23-1703.

A favorable consideration of the present amendment together with the original application is respectfully requested.

Respectfully submitted,

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AMENDMENTS TO THE DRAWING FIGURES

Applicant submits herewith replacement drawing sheets for Figures 1, 3, 4, and 5. The drawing figures as originally filed inadvertently used the phrase “GaAs Lateral Conduction Layer” in the layer above element 104 in each of Figures 1, 3, 4, and 5. The phrase has been changed to correctly read “GaAs”. Support for this amendment can be found on page 6, line 29 of the application as filed, which states that the lateral conduction layer is element 113.